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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,443	02/17/2004	Steven Scampini	PHUS030073	6171

28159 7590 06/06/2006

PHILIPS MEDICAL SYSTEMS
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3003
22100 BOTHELL EVERETT HIGHWAY
BOTHELL, WA 98041-3003

EXAMINER

JAWORSKI, FRANCIS J

ART UNIT	PAPER NUMBER
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3768

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/780,443	Applicant(s) SCAMPINI ET AL.	
	Examiner Jaworski Francis J.	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/6/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 3, 7 – 8, 11-12, 15 – 16 are again rejected under 35 U.S.C. 102(b) as being anticipated by Hayakawa (US6221016) which teaches structure and method of use for an ultrasound surgical puncture needle guidance system to observe and place a biopsy needle comprising probe 20 including a 2D volume scanning array e.g. 211 of Fig. 18 and attendant discussion rendering equivalent the planar and volumetric scanning techniques of the disclosure (col. 11 lines 12-42 and col. 33 lines 14 – 50 where the overall volume-scanned limits are reduced in obeisance to scan buildup times), transmit and receive beamformation portions 100, 201-203, for forming coherent echoes per Figs. 5-6, where the transmit beamformation steering and focusing occurs at a relatively higher uniform beam line density in the scan frame or volume subsector of the vicinity of the needle as depicted per Figs. 7a-7c and attendant col. 25 discussion, and volumetric image processing via 300, 500 for display onto 707. Both loading information as to probe length type and transmitting ultrasound Doppler tip interrogation by the body surface array in Hayakawa serve to identify the location of the invasive medical device in the imaged volume, see Col. 28 line 5 – col. 29 line 20 therein.

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Since at least col. 8 lines 39 – 56 refer to a teaching of a process in which at least for shallow depth needle insertions the beam to beam transit time delay is shortened to support increased scan line density without frame rate reduction, it is clear that Hayakawa et al embraces the means and process of in at least some circumstances overcoming the shortcoming that applicants are arguing would negative extension of beam line density control to the 3D case. Additionally, at least claim 1 does not in any case declare a reference for the increase of line density.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4 – 6, 9 – 10, 17 - 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa as applied to claim 1 above, and further in view of Savord.

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(US5678552) since whereas Hayakawa does not teach line density diminution progression, it would nonetheless have been obvious in view of the latter col. 10 discussion to apply non-uniform angular spacing for multiline processing with respect to a central investigated region of interest as in the former since this was known to obviate the frame rate problem discussed in col. 33 of the former. The minimum skirt beam density would then be fixed by the overall width of the volumetric scan.

Claims 13 – 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayakawa as applied to claim 11 above, and further in view of Vilkomerson et al (US4249539) or Martin et al (US5398691) insofar as the aforementioned discussion of Fig. 12 of Hayakawa et al relating to emission of vibration by the internally inserted needle tip would have been understood by the artisan to have been implementable as a 'reversal of parts' using passively received signals onto an omnidirectional sensing stylus or needle tip in light of Vilkomerson et al or by alternative electromagnetic position registry for locating an in-body medical device in view of Martin et al col. 7 top where the position determining signal of field generator 20 is passively received by sensor 56 of esophageal probe 14 in an analogous position-locating step.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

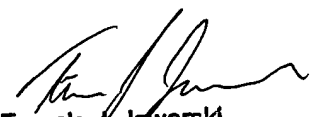
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

FJJ:fjj

05-29-06


Francis J. Jaworski
Primary Examiner